

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 79-88 (cancelled)

89. (new) A composition comprising an isolated HP30 polypeptide of *Helicobacter* spp. and an adjuvant or mixture of adjuvants.

90. (new) The composition of claim 89, wherein the *Helicobacter* spp. is *Helicobacter felis*.

91. (new) The composition of claim 89, further comprising a pharmaceutically acceptable carrier or diluent.

92. (new) The composition of claim 89, further comprising an immunogen or mixture of immunogens selected from lipids, lipoproteins, phospholipids, lipooligosaccharides, proteins, attenuated organisms or inactivated whole cells.

93. (new) The composition of claim 89, further comprising an immunogen or mixture of immunogens selected from *H. pylori* cytotoxin, *H. pylori* hsp60, *H. pylori* CagA, *H. pylori* urease, *H. pylori* catalase, *H. pylori* nickel binding protein, *H. pylori* tagA, *H. pylori* enolase, entire attenuated or killed organisms or subunits therefrom of *Campylobacter* spp., *Shigella* spp., Enteropathogenic *E. coli* spp., *Vibrio cholera* or rotavirus.

94. (new) The composition of claim 89, wherein said adjuvant or mixture of adjuvants is selected from alum, mLT, QS21, MF59, CpG DNA, PML, calcium phosphate, PLG or CFA.

95. (new) The composition of claim 94, wherein said adjuvant or mixture of adjuvants is mLT.

96. (new) The composition of claim 94, wherein said adjuvant or mixture of adjuvants is alum.

97. (new) The composition of claim 94, wherein said adjuvant or mixture of adjuvants is AB5.

98. (new) The composition of claim 94, wherein said adjuvant or mixture of adjuvants is CFA.

99. (new) The composition of claim 94, wherein said adjuvant or mixture of adjuvants is alum and AB5.

100. (new) The composition of claim 89, further comprising an isolated HP56 polypeptide of *Helicobacter* spp.

101. (new) A composition comprising an isolated polypeptide derived from HP30 of *Helicobacter pylori* and an adjuvant or mixture of adjuvants, wherein said isolated polypeptide has the same binding specificity as a polypeptide consisting of the sequence of SEQ ID NO:4.

102. (new) The composition of claim 101, wherein said isolated polypeptide is encoded by a polynucleotide that hybridizes under high stringency conditions to the complement of a nucleic acid sequence consisting of the sequence of SEQ ID NO:3.

103. (new) The composition of claim 102, wherein said isolated polypeptide comprises the sequence of SEQ ID NO:4.

104. (new) The composition of claim 103, wherein said isolated polypeptide is encoded by a polynucleotide comprising the sequence of SEQ ID NO:3.

105. (new) The composition of claim 101, further comprising a pharmaceutically acceptable carrier or diluent.

106. (new) The composition of claim 101, further comprising an immunogen or mixture of immunogens selected from lipids, lipoproteins, phospholipids, lipooligosaccharides, proteins, attenuated organisms or inactivated whole cells.

107. (new) The composition of claim 101, further comprising an immunogen or mixture of immunogens selected from *H. pylori* cytotoxin, *H. pylori* hsp60, *H. pylori* CagA, *H. pylori* urease, *H. pylori* catalase, *H. pylori* nickel binding protein, *H. pylori* tagA, *H. pylori* enolase, entire attenuated or killed organisms or subunits therefrom of *Campylobacter* spp., *Shigella* spp., Enteropathogenic *E. coli* spp., Vibrio cholera or rotavirus.

108. (new) The composition of claim 101, wherein said adjuvant or mixture of adjuvants is selected from alum, mLT, QS21, MF59, CpG DNA, PML, calcium phosphate, PLG or CFA.

109. (new) The composition of claim 108, wherein said adjuvant or mixture of adjuvants is mLT.

110. (new) The composition of claim 108, wherein said adjuvant or mixture of adjuvants is alum.

111. (new) The composition of claim 108, wherein said adjuvant or mixture of adjuvants is AB5.

112. (new) The composition of claim 108, wherein said adjuvant or mixture of adjuvants is CFA.

113. (new) The composition of claim 108, wherein said adjuvant or mixture of adjuvants is alum and AB5.

114. (new) The composition of claim 101, further comprising an isolated HP56 polypeptide of *Helicobacter pylori*.

115. (new) The composition of claim 103, further comprising a pharmaceutically acceptable carrier or diluent.

116. (new) The composition of claim 103, further comprising an immunogen or mixture of immunogens selected from lipids, lipoproteins, phospholipids, lipooligosaccharides, proteins, attenuated organisms or inactivated whole cells.

117. (new) The composition of claim 103, further comprising an immunogen or mixture of immunogens selected from *H. pylori* cytotoxin, *H. pylori* hsp60, *H. pylori* CagA, *H. pylori* urease, *H. pylori* catalase, *H. pylori* nickel binding protein, *H. pylori* tagA, *H. pylori* enolase, entire attenuated or killed organisms or subunits therefrom of *Campylobacter* spp., *Shigella* spp., Enteropathogenic *E. coli* spp., *Vibrio cholera* or rotavirus.

118. (new) The composition of claim 103, wherein said adjuvant or mixture of adjuvants is selected from alum, mLT, QS21, MF59, CpG DNA, PML, calcium phosphate, PLG or CFA.

119. (new) The composition of claim 118, wherein said adjuvant or mixture of adjuvants is mLT.

120. (new) The composition of claim 118, wherein said adjuvant or mixture of adjuvants is alum.

121. (new) The composition of claim 118, wherein said adjuvant or mixture of adjuvants is AB5.

122. (new) The composition of claim 118, wherein said adjuvant or mixture of adjuvants is CFA.

123. (new) The composition of claim 118, wherein said adjuvant or mixture of adjuvants is alum and AB5.

124. (new) The composition of claim 103, further comprising an isolated HP56 polypeptide of *Helicobacter pylori*.

125. (new) A method of reducing or preventing colonization of *Helicobacter* spp. in an individual, the method comprising administering to the individual an effective amount of an isolated HP30 polypeptide of *Helicobacter* spp.

126. (new) The method of claim 125, wherein said isolated polypeptide is administered to the individual intranasally.

127. (new) The method of claim 125, wherein said isolated polypeptide is administered to the individual by subcutaneous injection.

128. (new) The method of claim 125, wherein the individual is administered a combination of said isolated polypeptide and an adjuvant or mixture of adjuvants.

129. (new) The method of claim 128, wherein said adjuvant or mixture of adjuvants is selected from alum, mLT, QS21, MF59, CpG DNA, PML, calcium phosphate, PLG or CFA.

130. (new) The method of claim 129, wherein said adjuvant or mixture of adjuvants is mLT.

131. (new) The method of claim 129, wherein said adjuvant or mixture of adjuvants is alum.

132. (new) The method of claim 129, wherein said adjuvant or mixture of adjuvants is AB5.

133. (new) The method of claim 129, wherein said adjuvant or mixture of adjuvants is CFA.

134. (new) The method of claim 129, wherein said adjuvant or mixture of adjuvants is alum and AB5.

135. (new) The method of claim 125, further comprising administering an effective amount of an isolated HP56 polypeptide of *Helicobacter* spp.

136. (new) A method of reducing or preventing colonization of *Helicobacter pylori* in an individual, the method comprising administering to the individual an effective amount of an isolated polypeptide derived from HP30 of *Helicobacter pylori* wherein said isolated polypeptide has the same binding specificity as a polypeptide consisting of the sequence of SEQ ID NO:4.

137. (new) The method of claim 136, wherein said isolated polypeptide is encoded by a polynucleotide that hybridizes under high stringency conditions to the complement of a nucleic acid sequence comprising the sequence of SEQ ID NO:3.

138. (new) The method of claim 137, wherein said isolated polypeptide comprises the sequence of SEQ ID NO:4.

139. (new) The method of claim 138, wherein said isolated polypeptide is encoded by a polynucleotide comprising the sequence of SEQ ID NO:3.

140. (new) The method of claim 136, wherein said isolated polypeptide is administered to the individual intranasally.

141. (new) The method of claim 136, wherein said isolated polypeptide is administered to the individual by subcutaneous injection.

142. (new) The method of claim 136, wherein the individual is administered a combination of said isolated polypeptide and an adjuvant or mixture of adjuvants.

143. (new) The method of claim 142, wherein said adjuvant or mixture of adjuvants is selected from alum, mLT, QS21, MF59, CpG DNA, PML, calcium phosphate, PLG or CFA.

144. (new) The method of claim 143, wherein said adjuvant or mixture of adjuvants is mLT.

145. (new) The method of claim 143, wherein said adjuvant or mixture of adjuvants is alum.

146. (new) The method of claim 143, wherein said adjuvant or mixture of adjuvants is AB5.

147. (new) The method of claim 143, wherein said adjuvant or mixture of adjuvants is CFA.

148. (new) The method of claim 143, wherein said adjuvant or mixture of adjuvants is alum and AB5.

149. (new) The method of claim 136, further comprising administering an effective amount of an isolated HP56 polypeptide of *Helicobacter pylori*.

150. (new) The method of claim 138, wherein said isolated polypeptide is administered to the individual intranasally.

151. (new) The method of claim 138, wherein said isolated polypeptide is administered to the individual by subcutaneous injection.

152. (new) The method of claim 138, wherein the individual is administered a combination of said isolated polypeptide and an adjuvant or mixture of adjuvants.

153. (new) The method of claim 152, wherein said adjuvant or mixture of adjuvants is selected from alum, mLT, QS21, MF59, CpG DNA, PML, calcium phosphate, PLG or CFA.

154. (new) The method of claim 153, wherein said adjuvant or mixture of adjuvants is mLT.

155. (new) The method of claim 153, wherein said adjuvant or mixture of adjuvants is alum.

156. (new) The method of claim 153, wherein said adjuvant or mixture of adjuvants is AB5.

157. (new) The method of claim 153, wherein said adjuvant or mixture of adjuvants is CFA.

158. (new) The method of claim 153, wherein said adjuvant or mixture of adjuvants is alum and AB5.

159. (new) The method of claim 138, further comprising administering an effective amount of an isolated HP56 polypeptide of *Helicobacter pylori*.